

CLAIMS

We claim:

1. A vapor-dispensing toilet paper roll holder apparatus of the type having a first housing portion, a second housing portion, a spring configured to hold said first and second housing portions in axial extension, and at least one vent in at least one of said first and second housing portions, the vapor-dispensing toilet paper roll holder further comprising:

a reservoir configured to contain a volatizable material; and

a wick configured in communication with said reservoir, wherein said reservoir and wick comprise a material delivery system that is entirely contained within one of said first and second housing portions, and wherein once said material delivery system is enclosed in one of said first and second housing portions, that housing portion cannot be opened.

2. The vapor-dispensing toilet paper roll holder apparatus of claim 1, wherein said volatizable material remains substantially stationary with respect to said first and second housing portions when removing toilet paper from the toilet paper roll, and wherein removing toilet paper from the toilet paper roll on said toilet paper roll holder increases volatization of said volatizable material.

3. The vapor-dispensing toilet paper roll holder apparatus of claim 1, wherein the material delivery system is contained in tamper proof manner by entirely enclosing said reservoir and said wick in one of said first and second housing portions, wherein access to the wick is restricted to said at least one vent.

4. The vapor-dispensing toilet paper roll holder apparatus of claim 1, wherein a portion of one of said first and second housing portions forms the sides and at least one end of said reservoir.

5. The apparatus of claim 1 wherein each of said first and said second housing portions comprise at least one vent, wherein said first housing portion is axially rotatable with respect to said second housing portion, wherein said first and second housing portions are configured such that an axial rotation adjustment of said first housing portions relative to said second housing portion facilitates a variable range of exposed vents.

6. A passive vapor-dispensing toilet paper roll holder apparatus comprising:

a first housing portion;

a second housing portion, wherein said first and second housing portions are configured to align axially with axial adjustment relative to each other, wherein at least one of said first and second housing portions comprises at least one vent;

a material delivery system comprising a volatizable material, a reservoir for containing said volatizable material, and a wick, wherein said material delivery system is contained within said toilet paper roll holder to create a tamper proof assembly, wherein a first end of said wick is in contact with said reservoir for receiving said volatizable material, and wherein said wick is oriented substantially parallel to the axis of said toilet paper roll holder; and

a spring configured to hold said first and second housing portions in an extended axial position;

wherein said first and second housing portions are configured to be adjustable relative to each other to create at least an open position and a closed position, wherein in said closed position all of said at least one vent in said housing are covered to create a temporary barrier between said volatizable material and an external environment, and wherein in said open position at least one of said at least one vent is substantially open to allow said volatizable material to escape to the external environment; and

wherein the apparatus is activated by adjusting said first housing portion relative to said second housing portion to said open position from said closed position.

7. A vapor-dispensing toilet paper roll holder apparatus for holding a toilet paper roll, the apparatus comprising:

a first housing portion;

a second housing portion;

a spring configured to hold said first and second housing portions in axial extension and to substantially prevent rotation of said toilet paper roll holder when toilet paper is being removed from the toilet paper roll;

at least one vent in at least one of said first and second housing portions; and

a material delivery system contained within said toilet paper roll holder having a volatizable material, wherein said volatizable material remains substantially stationary with respect to said first and second housing portions when removing toilet paper from the toilet paper roll, and wherein removing toilet paper from the toilet paper roll on said toilet paper roll holder increases volatilization of said volatizable material.

8. A vapor-dispensing toilet paper roll holder apparatus for holding a toilet paper roll, the apparatus comprising:

a first housing portion;

a second housing portion;

a spring configured to hold said first and second housing portions in axial extension and to substantially prevent rotation of said toilet paper roll holder when toilet paper is being removed from the toilet paper roll;

at least one vent in at least one of said first and second housing portions; and

a material delivery system contained within said toilet paper roll holder and comprising a reservoir configured to contain a liquid volatizable material and a wick configured in communication with said reservoir.

9. The vapor-dispensing apparatus of claim 8, wherein said wick is oriented substantially co-axial with the axis of said toilet paper roll holder.

10. The vapor-dispensing apparatus of claim 8, wherein said at least one vent further comprises an adjustable venting structure comprising:

a first set of vents in said first housing portion;

a second set of vents in said second housing portion, wherein said second housing portion is axially rotatable with respect to said first housing portion; and

said adjustable venting structure having a maximum setting when said first set of vents and said second set of vents are aligned to produce a maximum opening, and a minimum setting when said first set of vents and said second set of vents are substantially misaligned.

11. The vapor-dispensing apparatus of claim 10, wherein said minimum setting corresponds to an opening of approximately 0%, and said maximum setting corresponds to an opening of approximately 30% of a total external surface area of said combined housings.

12. The vapor-dispensing apparatus of claim 8, wherein said wick is a porous plastic wick.

13. The vapor-dispensing apparatus of claim 12, wherein said porous plastic wick has an average pore size of between approximately 25 and 30 microns.

14. The vapor-dispensing apparatus of claim 9, wherein said material delivery system is configured to passively deliver said fragrance component into an environment in the form of a high-intensity vapor at a rate of between approximately 10.0 mg/hr and approximately 30.0 mg/hr.

15. The apparatus of claim 8, wherein said material delivery system is configured to passively deliver said fragrance component into said environment at a rate of approximately 15 mg/hr.

16. The apparatus of claim 8, wherein said material delivery system is configured to, during removal of paper from the roll, passively deliver said fragrance component into the environment at a rate that is 110% of the rate of dispensation when the roll is at rest.

17. The vapor-dispensing apparatus of claim 8, said volatizable material having a flash point of between approximately 100°F and 180 °F, a vapor pressure within said housing of between approximately 0.01 and 0.5 mmHg, and a mass ratio of said fragrance component to said volatizable material of at least approximately 75%.

18. The passive vapor-dispensing apparatus of claim 8, wherein said material delivery system comprises a blotter-board and wherein said blotter-board is saturated with said volatizable material and placed within at least one of said first and said second housings.

19. The passive vapor-dispensing apparatus of claim 8, wherein said material delivery system comprises a cellulose wadding and wherein said cellulose wadding is saturated with said volatizable material and placed within at least one of said first and said second housings.

20. The passive vapor-dispensing apparatus of claim 8, wherein said material delivery system comprises a tray and wherein said tray supports a gel volatizable material.

21. A passive vapor-dispensing toilet paper roll holder apparatus comprising:
a first housing portion;

a second housing portion, wherein said first and second housing portions are configured to align axially with axial adjustment relative to each other, wherein at least one of said first and second housing portions comprises at least one vent;

a material delivery system comprising a volatizable material contained in a reservoir and a wick, wherein said material delivery system is contained within said toilet paper roll holder, wherein a first end of said wick is in contact with said reservoir to receive said volatizable material, and wherein said wick is recharged with said volatizable material from said reservoir to replace volatizable material that has escaped from said wick to the environment; and

a spring configured to hold said first and second housing portions in an extended axial position and configured to substantially prevent rotation of said toilet paper roll holder.

22. The passive vapor-dispensing apparatus of claim 21, wherein said wick comprises a porous plastic material.

23. The passive vapor-dispensing apparatus of claim 21, wherein said reservoir is formed in part by one of said first and second housings and wherein said wick is press fit into said reservoir.

24. The passive vapor-dispensing apparatus of claim 21, wherein at least one of said first and said second housing portions comprises an end-of-life indicator comprising a viewing structure enabling view of the remaining amount of said volatizable material.

25. A vapor-dispensing toilet paper roll holder apparatus comprising:
a first housing portion;
a second housing portion;
at least one vent in at least one of said first and second housing portions;
a reservoir containing a high intensity fragrance oil and located within said toilet paper roll holder;

a wick located within said toilet paper roll holder and configured to deliver said high intensity fragrance oil in the form of a vapor, said wick having a first portion and a second portion, said first portion extending into said reservoir, wherein said wick is oriented substantially parallel to the axis of said toilet paper roll holder; and

a spring configured to maintain said first and second portions in an axially elongated position, and configured to substantially prevent the rotation of said toilet paper roll holder.